

REMARKS

Reconsideration and allowance of the above-reference application are respectfully requested.

I. STATUS OF THE CLAIMS

Claims 15, 19 and 22 are cancelled herein without prejudice or disclaimer.

Claims 11, 14, 16-18 and 24 are amended herein, and new claim 25 is added.

In view of the above, it is respectfully submitted that claims 11-14, 16-18, 20, 21 and 23-25 are currently pending and under consideration.

II. REJECTION OF CLAIMS 17, 19 AND 22 UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claim 17 is amended herein, and claims 19 and 22 are cancelled herein to overcome the 35 U.S.C. § 112, first paragraph rejection.

In view of the above, it is respectfully submitted that the rejection is overcome.

III. REJECTION OF CLAIMS 15-18 UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claim 15 is cancelled herein, and claims 16-18 are amended herein to overcome the 35 U.S.C. § 112, second paragraph rejection.

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. REJECTION OF CLAIMS 11, 14 AND 24 UNDER 35 U.S.C. § 103(A), THE COMBINATIONS OF MEDVED ET AL. (USP# 5,818,619A), SANDSTEDT (USP# 4,130,738A), AND KOBAYASHI (USP# 5,986,785A)

Claim 11 (as amended herein) of the present invention recites, "an optical filter provided on a contact surface with the apparatus-side communication unit of the optical module, to pass an infrared ray therethrough" and "a shielding section to optically shield light between said first converging lens and said second converging lens, and to enable simultaneous bi-directional optical communication."

Claim 14 (as amended herein) recites, "an optical filter provided in the window, to cut off a visual light and to pass an infrared ray therethrough, wherein the optical module includes a shielding section to optically shield light between said first converging lens and said second converging lens, and to realize full duplex communication."

Claim 24 (as amended herein) recites, “an optical filter provided on a contact surface with the apparatus-side communication unit of the optical module, to pass an infrared ray therethrough” and “a shielding section to optically shield light between said first converging lens and said second converging lens, and to enable simultaneous bi-directional optical communication.” (See page 15, line 22 to page 16, line 9; page 16, line 23 to page 17, line 5; page 25, line 19 to page 26, line 2; and FIGS. 1 and 2 of the Applicant’s specification.)

Medved teaches a wireless communication system having an airlink transceiver including an airlink transmitter and an airlink receiver for respectively transmitting and receiving signals over the air. Medved also teaches an optical communication network interface unit for transmitting optical signals to the airlink transmitter and for receiving optical signals from the airlink receiver, and a universal converter unit, coupled to the airlink transceiver and to the optical communication network interface unit, for supplying optical signals without protocol conversion to the optical communication network interface unit, and electrical signals to the airlink transceiver.

However, Medved teaches an optical communication in spatial mode, and fails to teach a communication using an optical fiber. Thus, the communication system of Medved does not have a function of communicating using an optical fiber, which is different from the present invention that communicates by using an optical fiber.

Further, the present invention realizes duplex communication at the same optical wavelength by using a shielding section. The duplex communication is also possible by an optical filter for cutting off a visual light provided on a light path. (See claims 11, 14 and 24.) As shown in FIG. 6 of the Applicant’s specification, LSI 341 provides controls for infrared communications in a half-duplex system (see page 40, lines 4 to 10). The LSI 341 functions to detect connection of the switching section, controlling communication speed, duplex system and half-duplex system. In contrast, Medved uses two wavelengths of 1300 nm and 850 nm, because Medved has no shielding section. Medved can be operated in duplex system, but not in half-duplex system. Accordingly, Medved cannot realize spatial communication.

Standstedt teaches a communication in which time is transmitted from a watch to a handset using proximate optical communication. Further, a radio wave is transmitted to the handset for communication. Standstedt appears to disclose a contact mode, but fails to teach or suggest a function of communicating using an optical fiber. As mentioned above, the present invention has a function of not only spatial communication but also contact communication using an optical fiber.

Kobayashi teaches a communication apparatus using an infrared ray that has no function of communicating in an optical-fiber mode.

In light of the above, it is respectfully submitted that the teachings of Medved, Sandstedt and Kobayashi, either alone or in combination, do not teach the features as recited in claims 11, 14 and 24 of the present invention.

Claims 12 and 13, and claims 16-18, 20, 21 and 23 depend from claims 11 and 14. Thus, for at least the reason that claims 11 and 14 distinguish over the cited prior art, it is respectfully submitted that claims 12, 13, 16-18, 20, 21 and 23 also distinguish over the cited prior art.

In view of the above, it is respectfully submitted that the rejection is overcome.

V. NEW CLAIM

New claim 25 is added and relates to an optical communication unit comprising "a signal transmitting/receiving section including a light receiving section to transmit an optical signal received from one of said apparatuses, and a light emitting section to transmit an optical signal transmitted from the other of said apparatuses to said one of said apparatuses" and "a converging lens coupled to an optical cable and arranged in light paths of the optical signal from said one of said apparatuses to said light receiving section, and the optical signal from said light emitting section to said one of said apparatuses, wherein said light receiving section and said light emitting section are integrated with each other." It is respectfully submitted that claim 25 patentably distinguishes over the cited prior art and defines allowable subject matter.

VI. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 8-26-04

By: Derrick L. Fields
Derrick L. Fields
Registration No. 50,133

1201 New York Ave, N.W., Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501